highlights the individuality of each donor and generates enthusiasm amongst students.

http://dx.doi.org/10.1016/j.ijsu.2016.08.049

1307: VAGUS NERVE STIMULATION: EFFECTS ON CHOLINERGIC NEURAL NETWORKS?

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Introduction: Vagus Nerve Stimulation (VNS) is currently a neurosurgical management for medication-resistant epilepsy. In animal studies, VNS can activate cholinergic networks. Cholinergic projections are mainly received from the Pedunculopontine Nucleus (PPN) or the Nucleus Basalis of Meynert (NBM). Cholinergic dysfunction is implicated in symptoms of neurodegenerative disorders. Cholinergic activity can be assessed electrophysiologically using Prepulse Inhibition (PPI) and Short Latency Afferent Inhibition (SAI).
Aim: To investigate whether VNS can access human cholinergic networks.
Method: Twenty subjects were recruited in a double-blinded randomised control trial. SAI involved median nerve stimulation preceding transcranial magnetic stimulation of the motor cortex at various interstimulus intervals (ISI). PPI incorporated median nerve stimulation before supraorbital nerve stimulation at several ISIs. Electromyograms were recorded from first dorsal interosseous and orbicularis oculi muscles. Non-invasive VNS (nVNS) and placebo sham intervention were delivered to the right vagus nerve.
Results: nVNS increased inhibitory effects of SAI significantly when compared with placebo stimulation ($P = 0.011$). The significant effect was only seen in the SAI-PPI trial order subgroup ($P = 0.021$). nVNS had no significant effect on PPI.
Conclusion: nVNS can modulate cholinergic pathways in humans. The dissociation between PPI and SAI suggests nVNS effects are likely to be mediated via the NBM.

http://dx.doi.org/10.1016/j.ijsu.2016.08.050

0484: ACT A POOR MARKER FOR HEPARIN DOSING IN ECMO PATIENTS: THE POTENTIAL ROLE FOR ANTI-XA ASSAYS

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Venoarterial extracorporeal membrane oxygenation (ECMO) with continuous heparinization is used for circulatory support after pediatric cardiac surgery. Currently, heparin doses are determined using activated clotting time (ACT) however, there is evidence suggesting that ACT is an unreliable marker in determining heparin doses, which ultimately could increase the risk of life threating bleeding.
Aim: To determine whether ACT is correlates with heparin dosing in patients on ECMO, and to investigate the potential role of anti-Xa assays as a viable, safe alternative.
Methods: This cohort study analysed 197 samples from 10 ECMO patients between 2014–15, and correlated heparin doses with subsequently measured ACT and factor Xa levels. Regression analyses were performed to determine the strength of the dose responses with heparin.
Results: ACT levels were found to very weakly correlate with heparin dosing ($r^2 = 0.009$, $p = 0.908$), whilst anti-Xa displayed a much stronger association. ACT was determined to be lower in those patients who underwent re-exploration for bleeding ($p \leq 0.001$).
Conclusion: ACT appears to be a poor marker for heparin dosing in paediatric cardiac patients on ECMO with potential for increased adverse outcomes. This study highlights that anti-Xa assays could act as a viable alternative to ACT for heparinization in patients on ECMO.

http://dx.doi.org/10.1016/j.ijsu.2016.08.051

0293: THE EFFECT OF BODY CONTOURING SURGERY ON WEIGHT LOSS MAINTENANCE FOLLOWING BARIATRIC SURGERY

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Background: Despite proven benefits of bariatric surgery in reducing weight, patients are often left with excess skin. Body-contouring-surgery (BCS) has been shown to improve quality of life and may help maintain weight-loss (WL). We evaluate the effect of BCS on WL over 3 years.
Methods: Two demographically matched groups of female patients were retrospectively analysed. The control group (n = 61) received gastric bypass surgery only. The test group (n = 30) received additional BCS 12 months afterwards. An independent *t*-test was used to compare mean WL at 1½, 3, 6, 12, 24 and 36 months. Statistical analysis was adjusted for patients lost to followup.
Results: Between 6 weeks and 12 months there was no difference in WL. At 24 months the test group (n = 21) lost a mean 35.7% of their pre-op weight; the control group (n = 54) lost a mean 30.2%. At 36 months the test group (n = 10) maintained WL with a loss of 35.0%; the control group (n = 15) increased weight from 24 months with a loss of 24.7%. Differences in WL at 24 and 36 months were statistically significant.
Conclusions: This suggests patients who undergo BCS after bariatric surgery lose significantly more weight and maintain WL 3 years after follow-up compared to those undergoing bariatric surgery alone.

http://dx.doi.org/10.1016/j.ijsu.2016.08.052

0138: DECISION MODELLING IN DONATION AFTER CIRCULATORY DEATH (DCD) LIVER TRANSPLANTATION

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Introduction: Donated after circulatory death (DCD) liver transplantations are increasingly used to meet waiting list demands, yet provide inferior outcomes compared to donated after brain death (DBD) allografts. This study aimed to determine the optimal decision for patients offered a DCD allograft based on their current Model for End-Stage Liver Disease (MELD) score - to accept, or remain wait-listed for DBD transplantation.
Methods: A Markov decision model was constructed to predict the 5 year clinical course of patients on the liver waiting list. Model parameters and confidence intervals were determined from the UK Transplant registry; appropriate literature; and local quality of life data. Sensitivity analyses were conducted to assess the impact of parameter uncertainties on conclusions.
Results: Quality-adjusted life years (QALYs) accumulated after 5 years were significantly higher in DCD-recipients (3.78, 95% CI = 3.63–3.93) than those remaining on the waiting list with MELD scores of 15–20 (3.33, 95% CI = 3.05–3.58), or > 20 (3.03, 95% CI = 2.71–3.33). There was no significant difference for MELD scores < 15 (3.52, 95% CI = 3.29–3.74).
Conclusions: This model predicts that patients on the UK liver transplant waiting list with MELD scores > 15 should accept any DCD allograft offered. However, the optimal decision for patients with MELD scores < 15 remains unclear.

http://dx.doi.org/10.1016/j.ijsu.2016.08.053

0964: INCREASED MORTALITY IN THE ELDERLY TRAUMA PATIENT: AGE, INJURY UNDERESTIMATION OR INAPPROPRIATE EARLY TRAUMA CARE?

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Aim: "Payment by Results" incentivises care quality using best practice indicators. This study investigates effects of trauma "best practice" achievement, age and injury severity score (ISS) on outcomes for polytraumatic injury in younger (<65 years) and elderly (>65 years) patients, the latter being a rapidly increasing but under-researched cohort.
Method: Consecutive patients presenting to one major trauma centre with ISS of over 8 (excluding isolated proximal femoral fractures) were